

Docket No.: 200311928-1

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :
Charles R. Weirauch : Confirmation No. 4096
U.S. Patent Application No. 10/618,115 : Group Art Unit: 2627
Filed: July 10, 2003 : Examiner: Tawfik A. Goma

For: OPTICAL STORAGE MEDIUM WITH OPTICALLY DETECTABLE MARKS

AMENDMENT UNDER 37 C.F.R. 1.111

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action of May 5, 2006, please amend the above-identified application as follows:

Amendments to the Drawings

Please add the attached drawing, FIG. 6.

Amendments to the Specification

Please replace the paragraph beginning at page 3, line 11 of the instant specification with the following paragraphs:

Fig. 5 is a flowchart of the operation of the optical device shown in Fig. 4 in accordance with an illustrative embodiment of the invention; and

Fig. 6 is an illustration showing a trapezoidal shaped optically detectable mark according to an embodiment.

A marked up version of the original text is as follows:

Fig. 5 is a flowchart of the operation of the optical device shown in Fig. 4 in accordance with an illustrative embodiment of the invention; and

Fig. 6 is an illustration showing a trapezoidal shaped optically detectable mark according to an embodiment.

REMARKS

Reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1-18 and 27-29 remain pending.

A new drawing is being submitted herewith reflecting a trapezoidal shaped mark 210. Support for the drawing is found at at least page 7, line 8 of the instant specification. The specification is being amended to reflect the addition of new FIG. 6.

The objection to the drawings is believed overcome in view of the foregoing drawing amendment. Withdrawal of the objection is respectfully requested.

Claims 1-3, 5, 6, 9-18, and 27-29 are patentable over Satoh et al. (U.S. Patent 5,119,363)

The rejection of claim 1 under 35 U.S.C. 102(b) as being anticipated by Satoh is hereby traversed. A rejection based on 35 U.S.C. §102 requires every element of the claim to be included in the reference, either directly or inherently. Satoh fails to disclose all elements of claim 1 as Satoh fails to disclose at least an optically detectable mark being readable by a plurality of different optical systems configured for different types of optical storage media. There are at least two reasons claim 1 is patentable over Satoh.

1. Satoh's index marks are read by a single optical system

The Patent and Trademark Office (PTO) asserts that Satoh discloses "the at least one optically detectable mark being readable by a plurality of different optical systems configured for different types of optical storage media (col. 5 lines 61-66 and

col. 11 lines 3-16)." at page 3, paragraph 3 of the present Official Action. Column 5, lines 61-66 of Satoh is reproduced herein for convenience and ease of reference:

Since the index mark 9 is formed by making the surface of the optical disk 1 coarse in the order of 1 micrometer in the same manner as the dimension of the guide tracks, the index mark 9 can be readily detected by an incoherent light source, such as a light-emitting diode, without using a laser light source.

The above portion of Satoh appears to describe the use of an incoherent light source for reading an index mark on the surface of an optical disk. There is no disclosure of a mark readable by a plurality of different optical systems.

Column 11, lines 3-16 of Satoh is reproduced herein for convenience and ease of reference:

In addition to, distinguishing between the sides of an optical disk, a similar index mark may be used to distinguish a disk from another. In other words, a plurality of kinds of disks may be distinguished from others by forming a specific index mark on disks of a given kind. Since the index mark can be used to ascertain the front or back side of a disk, and to ascertain the kind of a disk, there is an advantage that there is no need to scan a track carrying such information by means of a laser light beam. In the case that different intensity of reading laser beam and writing laser beam is required in accordance with the kind of the disk, suitable intensity of the laser light beam can be selected without energizing the laser.

The above portion of Satoh appears to describe the use of the previously-described incoherent light source, see column 5, lines 61-66 set forth above, to distinguish a disk from another. There is no disclosure of a mark readable by a plurality of different optical systems.

Further, the above portion of Satoh states that "there is an advantage that there is no need to scan a track carrying such information by means of a laser light beam."

Thus, a different optical system is not used based on the disclosure of Satoh. As stated by Satoh, the “laser light beam can be selected without energizing the laser.” Satoh fails to disclose an optically detectable mark which is readable by a plurality of different optical systems. For at least this reason, withdrawal of the rejection is respectfully requested.

2. Satoh’s index marks are not read by different optical systems

Second, Satoh fails to disclose that the index marks are read by different optical systems. Satoh appears to describe the use of an “index mark detector” to detect the index marks on the optical disk using, e.g., an incoherent light source, such as a light emitting diode. Satoh at column 5, lines 1-2. Satoh appears to describe with respect to the FIG. 10 embodiment, the index mark detector detects the index marks on the optical disk, while an optical head 28 reads and/or writes data from/to the optical disk at a particular sector. Nowhere does Satoh appear to disclose the optical head 28 as detecting or reading the index marks on the optical disk. Therefore, an optically detectable mark readable by a plurality of different optical systems is not disclosed by Satoh. For at least this reason, withdrawal of the rejection is respectfully requested.

Based on at least the foregoing, claim 1 is patentable over Satoh and the rejection should be withdrawn.

Claims 2-3, 5, 6, and 9-11 depend, either directly or indirectly, from claim 1, include further limitations, and are patentable over Satoh for at least the reason advanced above with respect to claim 1. The rejection of claims 2-3, 5, 6, and 9-11 should be withdrawn.

Claims 12, 27, and 29 are patentable over Satoh for at least reasons similar to those advanced above with respect to claim 1 and the rejection should be withdrawn.

Claims 13-18 and 28 depend, either directly or indirectly, from claims 12 and 27, respectively, include further limitations, and are patentable over Satoh for at least the reasons advanced above with respect to claims 12 and 27. The rejection of claims 13-18 and 28 should be withdrawn.

Claims 1, 2, and 4 are patentable over Kobayashi (U.S. Patent 6,278,672)

The rejection of claim 1 under 35 U.S.C. 102(b) as being anticipated by Kobayashi is hereby traversed. A rejection based on 35 U.S.C. §102 requires every element of the claim to be included in the reference, either directly or inherently. Kobayashi fails to disclose all elements of claim 1 as Kobayashi fails to disclose at least an optically detectable mark being readable by a plurality of different optical systems configured for different types of optical storage media.

The PTO asserts that Kobayashi discloses at least one optically detectable mark being readable by a plurality of different optical systems configured for different types of optical storage media at Fig. 6 and Fig. 4. This is incorrect as Kobayashi appears to attempt to measure distance between detected layers of an optical disk without the use of an optically detectable mark which is readable by different optical systems as claimed in claim 1.

Kobayashi appears to determine the presence of data layers and not of marks readable by multiple optical systems. Kobayashi appears to use a focus error signal to

determine an approximate vertical location of data layers, whereby the vertical locations determine the media type for which a given optical system is selected. Kobayashi fails to disclose an ability to read the optically detectable marks by different optical systems.

As stated above, Kobayashi appears to describe the detection of data layers without a disclosure of readability of the detected data layer by a plurality of different optical systems. Kobayashi describes the selection and use of an appropriate optical system for reading the detected data layers at column 3, lines 45-55 and column 5, lines 24-32. Because an appropriate optical system must be selected, Kobayashi fails to disclose a mark which is readable by a plurality of different optical systems. For at least this reason, withdrawal of the rejection is respectfully requested.

Based on at least the foregoing, claim 1 is patentable over Kobayashi and the rejection should be withdrawn.

Claims 2 and 4 depend, either directly or indirectly, from claim 1, include further limitations, and are patentable over Satoh for at least the reason advanced above with respect to claim 1. The rejection of claims 2 and 4 should be withdrawn.

Claims 1, 6, and 7 are patentable over Hayashi (U.S. Patent 5,684,773)

The rejection of claim 1 under 35 U.S.C. 102(b) as being anticipated by Hayashi is hereby traversed. A rejection based on 35 U.S.C. §102 requires every element of the claim to be included in the reference, either directly or inherently. Hayashi fails to disclose all elements of claim 1 as Hayashi fails to disclose at least an optically detectable mark being readable by a plurality of different optical systems configured for different types of optical storage media.

The PTO asserts that Hayashi discloses at least one optically detectable mark being readable by a plurality of different optical systems configured for different types of optical storage media at column 12, lines 34-46. Column 12, lines 34-46 of Hayashi is reproduced herein for convenience and ease of reference:

There is a method using information which is recorded at a lead-in area of the disc which is commonly assured in both of the CD and the DVD. The lead-in area is a recording area prepared in, for example, the innermost rim portion of the disc and exists at a position prior to a program area for recording main information. In the lead-in area, various signals indicative of the recording contents or outline of the program area, or the like are recorded. As one of the recording signals, there is a disc discrimination signal indicating that the disc belongs to the disc of which type (kind). That is, the disc discrimination signal indicates any one of the single layer DVD, dual layer DVD, DVD-R, and DVD-RAM.

The above portion of Hayashi appears to describe making use of Table of Contents information for CDs and Control Data Zone information for DVDs. Such information appears to be stored at the media's respective data density and is not readable by different optical systems for different types of optical storage media. For example, a first optical system may attempt to read a particular type of lead-in area information and, in the event of failure of the attempt, a switch to a second optical system is performed to attempt to read the lead-in area information. If the second optical system attempt fails, the media is rejected as invalid. Thus, Hayashi fails to disclose a mark which is readable by different optical systems configured for different types of optical storage media as claimed in the present claimed subject matter. For at least this reason, withdrawal of the rejection is respectfully requested.

Based on at least the foregoing, claim 1 is patentable over Hayashi and the rejection should be withdrawn.

Claims 6 and 7 depend, either directly or indirectly, from claim 1, include further limitations, and are patentable over Hayashi for at least the reason advanced above with respect to claim 1. The rejection of claims 6 and 7 should be withdrawn.

Claim 8 is patentable over Hayashi

The rejection of claim 8 under 35 U.S.C. 103(a) as being obvious in view of Hayashi is hereby traversed. At least as described above with respect to claim 1 from which claim 8 depends, Hayashi fails to disclose all elements of claim 1 as Hayashi fails to disclose at least an optically detectable mark being readable by a plurality of different optical systems configured for different types of optical storage media. For at least this reason, withdrawal of the rejection is respectfully requested.

Further, the PTO's Official Notice regarding a person of ordinary skill in the art providing a lead-out area with an optically detectable mark in order to provide a guard area for the disk is challenged. The PTO is requested to produce authority for this statement.

The PTO is reminded of MPEP §2144.03 which sets forth the standard for taking Official Notice as follows:

“[a]ny rejection based on assertions that a fact is well-known or is common knowledge in the art without documentary evidence to support the examiner's conclusion should be judiciously applied. . . . [and] any facts so noticed should be of notorious character and serve only to 'fill in the gaps' in an insubstantial manner which might exist in the evidentiary showing made by the examiner to support a particular ground for rejection. It is never appropriate to rely

solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection was based.”

The PTO has failed to provide any support for the “principal evidence upon which the rejection is based. For at least this reason, withdrawal of the rejection is respectfully requested.

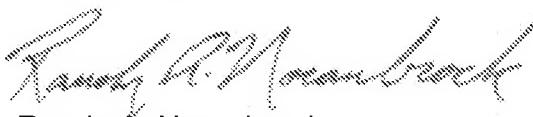
Conclusion

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 08-2025 and please credit any excess fees to such deposit account.

Respectfully submitted,

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10/618,115

New drawing

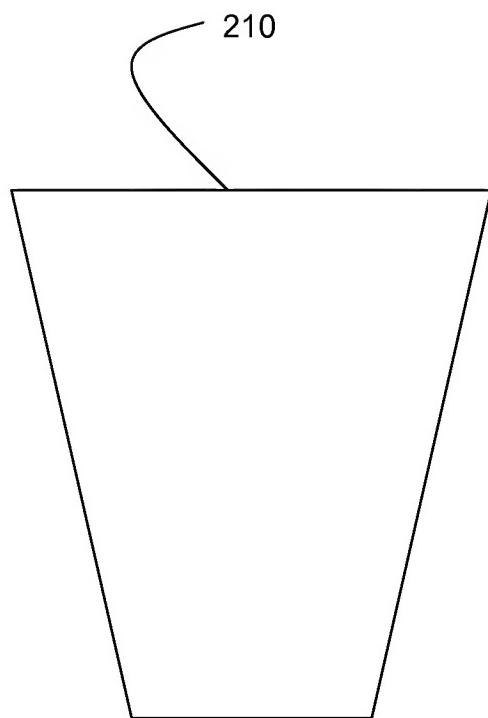


FIG. 6